

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P562209

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-93-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562209
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-1LO-40-UNV-93-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2949.0 lumens
Efficiency: N/A
Efficacy: 126.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

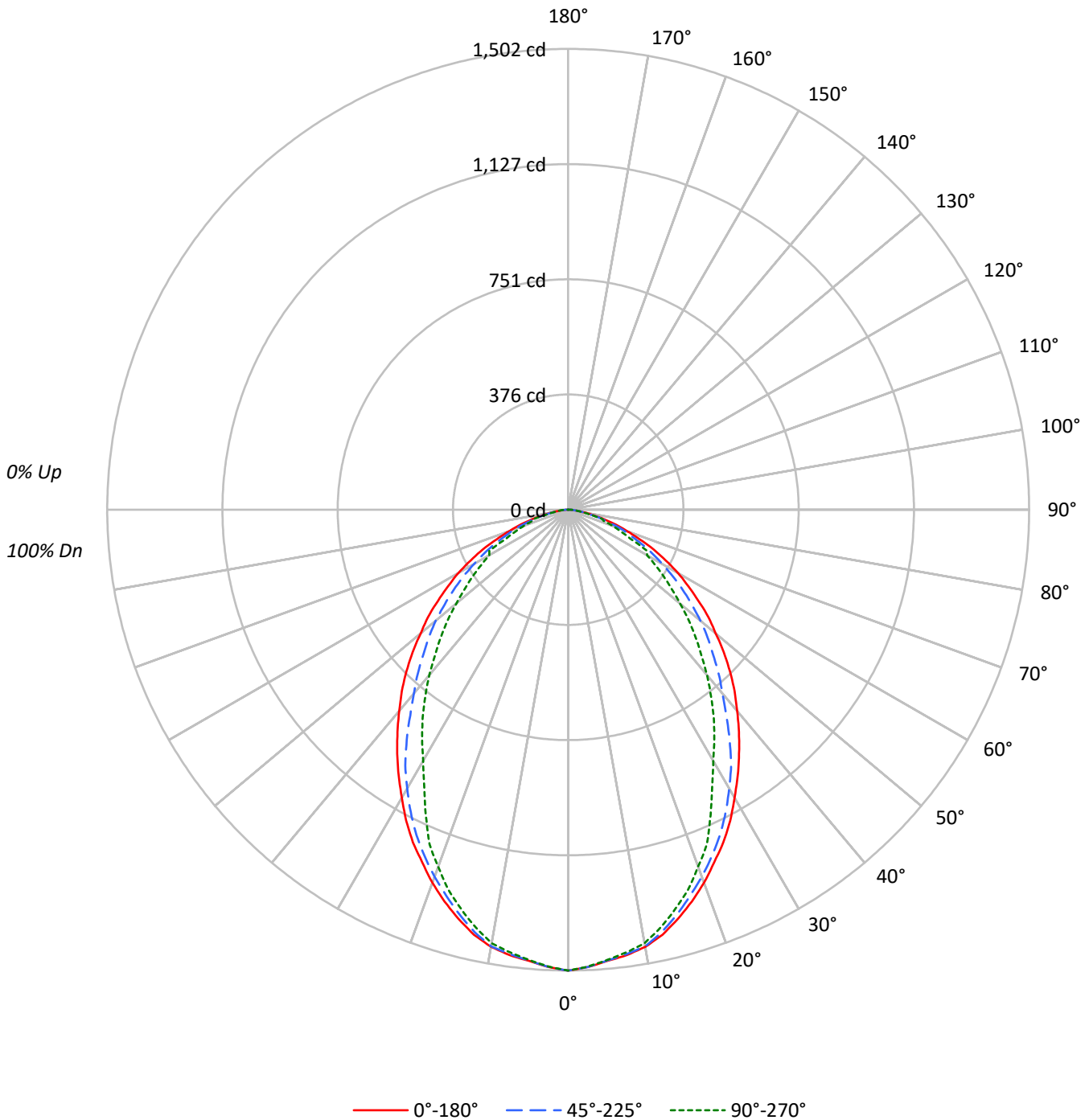
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89					87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77					75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67					65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58					56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52					50				
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46					44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42					40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38					36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34					33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32					30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2021	2021	2021
5°	1994	1991	1989
10°	1976	1974	1960
15°	1923	1904	1877
20°	1853	1823	1773
25°	1776	1738	1629
30°	1684	1630	1468
35°	1595	1506	1358
40°	1504	1373	1235
45°	1418	1269	1117
50°	1312	1178	996
55°	1214	1067	892
60°	1112	953	799
65°	979	835	708
70°	806	731	601
75°	641	560	587
80°	431	404	377
85°	269	321	375

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1418 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.8	4.7
10°-20°	383.8	13.0
20°-30°	531.3	18.0
30°-40°	566.5	19.2
40°-50°	516.8	17.5
50°-60°	404.9	13.7
60°-70°	263.9	8.9
70°-80°	116.9	4.0
80°-90°	25.1	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1054.9	35.8
0°-40°	1621.4	55.0
0°-60°	2543.1	86.2
0°-90°	2949.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2949.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1502	1502	1502	1502	1502	
5°	1476	1474	1474	1473	1473	140
15°	1381	1381	1367	1353	1348	388
25°	1196	1190	1170	1129	1098	549
35°	971	964	917	848	827	607
45°	745	729	667	611	587	574
55°	518	502	455	401	380	464
65°	307	290	262	267	222	303
75°	123	115	108	102	113	132
85°	17	19	21	23	24	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1502.2	1502.2	1502.2	1502.2	1502.2
2.5°	1491.8	1491.8	1491.8	1490.0	1490.0
5°	1476.1	1474.4	1474.4	1472.7	1472.7
7.5°	1464.0	1462.2	1460.5	1458.8	1455.3
10°	1446.6	1446.6	1444.9	1436.2	1434.5
12.5°	1418.8	1417.1	1410.1	1398.0	1394.5
15°	1380.6	1380.6	1366.7	1352.8	1347.6
17.5°	1338.9	1337.2	1319.8	1305.9	1299.0
20°	1293.8	1290.3	1272.9	1250.4	1238.2
22.5°	1243.4	1243.4	1222.6	1193.1	1180.9
25°	1196.5	1189.6	1170.5	1128.8	1097.5
27.5°	1142.7	1132.3	1111.4	1052.4	1015.9
30°	1083.7	1078.4	1048.9	972.5	944.7
32.5°	1028.1	1019.4	988.1	908.3	885.7
35°	970.8	963.8	916.9	847.5	826.6
37.5°	913.5	904.8	845.7	790.2	764.1
40°	856.2	845.7	781.5	731.1	703.3
42.5°	802.3	788.4	725.9	672.1	640.8
45°	745.0	729.4	666.9	611.3	587.0
47.5°	687.7	673.8	616.5	559.2	531.4
50°	626.9	614.8	562.7	505.4	475.8
52.5°	576.6	557.5	507.1	449.8	425.5
55°	517.5	501.9	455.0	401.2	380.3
57.5°	463.7	448.0	404.6	354.3	336.9
60°	413.3	390.7	354.3	310.9	297.0
62.5°	357.7	340.4	309.1	272.7	290.0
65°	307.4	290.0	262.2	267.4	222.3
67.5°	251.8	243.1	218.8	194.5	187.6
70°	204.9	194.5	185.8	159.8	152.8
72.5°	163.2	152.8	140.7	126.8	121.6
75°	123.3	114.6	107.7	102.5	112.9
77.5°	85.1	81.6	76.4	71.2	69.5
80°	55.6	53.8	52.1	50.4	48.6
82.5°	33.0	33.0	33.0	33.0	33.0
85°	17.4	19.1	20.8	22.6	24.3
87.5°	10.4	10.4	12.2	13.9	15.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)